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ABSTRACT

In this study of 40 disadvantaged Mexican-American first grade children it was hypothesized that praise from a Mexican-American adult would be more reinforcing to a Mexican-American child than praise from an Anglo adult. Further, it was hypothesized that praise in Spanish would be more reinforcing to a Mexican-American child than praise delivered in English. A bar-pressing task was used to assess the child's continued motivation to perform. The results indicate that examiner ethnicity was a much stronger determinant of bar pressing behavior than the language in which praise was given. Mexican-American children responded more to praise from a Mexican-American adult than they did from an Anglo adult. Results are discussed in terms of motivational and reinforcement considerations. (SBT)

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THE EFFECTS OF EXAMINING ETHNICITY
AND LANGUAGE ON THE PERFORMANCE OF
BILINGUAL MEXICAN-AMERICAN FIRST GRADERS

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Abstract

The influence of examiner ethnicity and language on the bar pressing behavior of 40 poor bilingual Mexican-American first graders was studied. An Anglo and a Mexican-American female examiner individually worked with two groups of children praising them in Spanish and then in English or the reverse language order during two experimental phases. The ethnicity main effect and order by language interaction attained significance. Ss praised by the Mexican-American examiner exhibited higher response levels than those praised by the Anglo examiner. While effectiveness of Spanish praise was not affected by order, that of English increased when dispensed after Spanish. Limitations of the study and implications for bilingual education were discussed.

THE EFFECT OF EXAMINER ETHNICITY AND LANGUAGE
ON THE PERFORMANCE OF BILINGUAL
MEXICAN-AMERICAN FIRST GRADERS¹

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Mexican-Americans comprise one of the largest minority groups in the United States and the vast majority of them leave school before completing their formal education (21). In 1960, the median schooling for Mexican-American males throughout the Southwest was 8.1 years compared with 11.8 years for Anglos (11). A survey of Mexican-American families with children in poverty area schools of Tucson, Arizona revealed that the mean level of schooling for parents in the sample was 7.7 years, with only 11 per cent having completed high school (29).

In another investigation of Mexican-American children in Tucson, Henderson (13, p. 3) reported that by junior high school, the cumulative records of these students "indicate that the performance gap between low achievement and school ability grows larger as the children progress through school." Clearly the inability of schools to successfully develop academic skills of many Mexican-American students or even to motivate them to stay in the school milieu demands attention.

The cumulative deficit mentioned by Henderson has also been found to be characteristic of children of other economically deprived groups (7). The inability of the disadvantaged child to profit from traditional school programs has prompted investigations of cognitive and motivational properties

of conventional pedagogical practice. The present study focuses on variables influencing the motivation of Mexican-American children.

In discussing the lack of motivation that seemed to afflict many low socioeconomic students, Meacham and Wiesen (22) have found that these children tend not to respond to social reinforcement such as teacher approval or praise. Gray and Klaus's (12) study offers partial explanation for this finding; they suggested that the disadvantaged child received less reinforcement for his behavior from adults and the reinforcement was probably not verbal. It has been found (27, 30) that disadvantaged children were not as responsive to verbal reinforcement or simple knowledge of results as they were to material reinforcers. In these studies, however, little attention was directed as the influence of the praise agent's ethnicity on the reinforcing value of his praise.

Reviews of the literature in the area of physical and personal characteristics of E indicate that ethnicity was of primary importance, particularly for the performance of young children on simple tasks (23, 24). Zigler and associates (3, 4, 19, 20) have proposed a valence explanation for an adult's social reinforcer effectiveness which permits consideration of the adult's ethnicity as a discriminable cue bearing on the motivational properties of his praise. However, not one of the studies in the above reviews investigated the effect of E's race with Mexican-American children.

In discussing Mexican-American ethnicity, many Mexican-Americans and social scientists (6, 9, 18, 29) considered language (the use of Spanish) as important as physical characteristics. Barker (2) and Yoshino et al., (29) have found that Spanish was identified in the Mexican-American community as the language of intimate and family relations, while the use of English became more prevalent as social distance increased.

There is an extensive body of experimental and descriptive research on the affective properties of language (e.g., 8, 25). Baldwin (1) and Carroll (5) suggested that the affective properties of language which are acquired very early in a child's development may gain their positive value through association with primary reinforcers dispensed by the caretaker. The positive valence associated with the primary language has many affective manifestations. It is generally agreed (10, 14, 16, 17) that people develop a powerful involvement with the language first learned.

There is recent evidence (29) that the primary language of the Mexican-American children in the Tucson sample was Spanish. It was found that 45 per cent of the Mexican-American mothers spoke to their children solely in Spanish; only 12 per cent talked to their children exclusively in English. Thus as many as 88 per cent of these entering first grade children may respond to English as a second language.

The above investigations suggest hypotheses regarding the motivating effects of adult ethnicity and language on the task performance of poor Mexican-American youngsters. It was hypothesized that praise from a Mexican-American adult would be more reinforcing to a Mexican-American child than that of an Anglo adult. Further, it was hypothesized that praise in Spanish would be more reinforcing to a Mexican-American child than praise delivered in English.

Method

Subjects

From the first grade of an elementary school located in an economically depressed area of Tucson, Arizona, a sample of 20 male and 20 female bilingual Mexican-American children was randomly drawn and assigned to one of the experimental conditions. The school was receiving aid

under the Federal Follow Through Program. School records and teacher reports indicated that 94 per cent of the first graders were bilingual Mexican-Americans. The selected Ss ranged in age from 6.2 to 7.8 years with a mean age of 6.8 years.

Examiners

Two female graduate students in their early twenties served as Es during the study. The Anglo E, of northern European extraction, was 5 feet 2 inches in height, with fair skin, brown hair, and light blue eyes. The Mexican-American E, of Mexican Indian-Spanish ancestry, was also 5 feet 2 inches tall, with olive skin, black hair and dark brown eyes. The Anglo E had taken three years of college level Spanish and had spoken it occasionally during the previous two years in which she had lived in Tucson. The Mexican-American E, who grew up in Tucson, was a native speaker of Spanish and had studied it for four years in college. After intensive practice prior to and during the study, the pronunciation and delivery of the instructions and praise were judged comparable by an independent group of bilingual Mexican-American graduate students.

Apparatus and Task

In reviewing studies of the motivational influence of social reinforcement, Stevenson (26) suggested the following task requisites for this type of research: "dull, apparently endless, requires minimal prior learning, has no clear criteria for adequate performance, and uses discrete responses" (p. 99). Accordingly, bar pressing was selected as the task for this study.

The bar pressing apparatus was fashioned to resemble a clown's face. It was constructed from a one-gallon Hills Brothers coffee can with the

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red filigree pattern converted into a clown-faced bar press mechanism. A Veeder-Root electric counter wired to the tongue of the clown recorded the number of times S pressed the clown's tongue. Also connected to the tongue was a Gerbrand's Cumulative Recorder. One pen on the recorder graphically registered each S's bar pressing response; a second pen was connected to an "event button" which E held in her hand and pressed to mark the beginning and end of each experimental phase as well as to note any unusual occurrence.

The clown's head was taped four inches from the edge of a primary-size table in an eight by ten foot experimental room within a mobile trailer which was located on the school grounds. There was direct access to the experimental room through an outside door. The wires to the recorder and counter extended from the back of the clown through a hole in the wall to a separate control room where the counter and recorder were monitored by an adult graduate student. The control room was located immediately adjacent to the experimental room and was equipped with one-way glass to additionally permit unobtrusive visual monitoring of S's behavior. On E's table directly behind S rested the event button, a copy of the instructions, a stop watch, and the schedule of reinforcers.

Procedures

Each S was randomly assigned to one of four experimental groups; thus five male and five female Ss served in each variation. Each E worked with two groups. Each S experienced two phases lasting three minutes each. During Phase One (P1), E praised S on a variable interval schedule. Phase Two (P2) consisted of a repetition of P1 with E praising S in the alternative language i.e., if she praised him in Spanish during the previous phase, she praised him in English during this phase.

To counterbalance any potential sequence effects of the praise-language order for each E, one group was presented the English followed by Spanish (E-S) language order and the second group received the Spanish followed by English (S-E) order. Thus, each experimental group was praised by an Anglo or a Mexican-American E according to an E-S or a S-E language order.

E conducted the experimental session individually with each child. Each E followed detailed instructions governing her interactions with each S from the time they met in the classroom to the end of the experimental session. After getting a child from class, each E would guide him to the mobile trailer experimental room where the clown was located on the table. E guided S over to the table with the clown, asked him to sit down on a small chair placed in front of the clown, and gave him the following instructions in English: "This is where you will be playing your part of the game. Your part of the game will be pressing down on the clown's tongue like this." Whereupon E pressed the tongue exactly ten times in 3.5 seconds. E thus modeled ten presses and stressed the word pressing to insure that S perceived that the game was continuous.

E explained that her part of the game would involve doing some work seated behind S with her back to him: "I'll play the game with you in a few minutes, but before I do that I have to do some work. While you're waiting, you can play with the clown or rest or do anything you like."

While S familiarized himself with the apparatus and the situation, E sat at the table facing away from S doing paper work for three minutes. This seating arrangement forestalled any interaction between E and S, precluding E's inadvertent reinforcement of S's behavior by her facial expressions or posture (vide 28). Very few Ss left their chair in order to interact with E; those who did were ignored.

At the beginning of P1, E looked over her shoulder saying, "It's time to begin the game. Do you remember what you're going to be doing? You will be pressing the tongue."

If the praise during P1 was to be in English, E continued, "Are you ready? Start pressing now." If the instructions and praise were to be in Spanish, E said, "Ya es hora de comensar. Te acuerdas lo que vas hacer? Vas a plastar la lengua. Estas lista (o) para comensar? Comienza aplastar ya." E then praised S on an increasing variable schedule.

After P1, E stopped S for 30 seconds. E then initiated P2 by instructing S in the alternative language to begin pressing again; E began praising again on the same schedule but in the second language. P2 instructions were otherwise identical to those specified for P1. Following P2, E stopped S, and then escorted him back to his classroom.

Results

The rate of bar pressing behavior was analyzed using a 2 X 2 X 2 factorial analysis of variance design (15) with the effects of ethnicity and language order being compared across phases as trials. Table 1 presents the mean number of responses and standard deviation for each phase under the four experimental conditions.

Insert Table 1 about here

A significant main effect for ethnicity ($F = 4.77$, $df = 1/36$, $p < .05$) was found, with Ss praised by the Mexican-American E evincing higher levels of bar pressing ($M = 311.5$) than those praised by the Anglo E ($M = 225.6$). No other main effects attained significance.

The interaction of language order and praise language also proved significant ($F = 18.06$, $df = 1/36$, $p < .01$).

Tukey HSD tests (15) were used to analyze the components of this interaction. It was found that the Spanish praise first presentation was not significantly different from the Spanish praise second presentation; that is, Ss did not differ significantly in their response level when praised in Spanish before or after being praised in English. However, English praise when presented second was significantly more motivating than when English praise was presented initially ($p < .05$); that is, Ss demonstrated higher levels of response after they had been praised in Spanish than when initially praised in English. No other interactions among the variables attained significance.

Discussion

It was found that E ethnicity was a much stronger determiner of bar pressing behavior than the language in which praise was given. The motivational effect of E ethnicity on the behavior of Mexican-American children in this study was consistent with ethnicity effects observed in studies conducted with other racial groups (23, 24). As predicted, bilingual Mexican-American children responded more to praise by a Mexican-American adult than they did to praise by an Anglo adult. A main effect for language which predicted that Spanish praise would elicit higher levels of bar pressing than English praise.

While Ss were not affected by order when praised in Spanish, they pressed significantly more when praised in English after Spanish. Perhaps the most parsimonious explanation of this complex order by praise language interaction is that when a Mexican-American child encountered an unfamiliar Spanish-speaking adult in a setting generally characterized by a

high degree of social distance, the child attached increased valence to the adult who used the language which had been paired with the positive stimuli of home and nurturance. Then when E switched back to English, the usual language of the school setting, the motivating value of his English praise was significantly enhanced.

It is important to note that this finding of attenuated reinforcement value of adult verbal praise was drawn from an experimental setting where a Mexican-American child was individually tested by an unfamiliar adult. However, Zimmerman and Pike (31) have found similar results in a prototypic classroom setting. They used second grade Mexican-American children from the same school involved in the present investigation. It was found that although English praise delivered to small groups of these children by a familiar Anglo adult exerted some degree of reinforcing effects on their question-asking behavior, the unsystematic fluctuations observed in response rate suggested that praise (in English) alone may not be a sufficient reinforcer to optimize responding.

Other factors also delimit the generalizability of the ethnicity effects obtained in this study. These motivational effects were studied for only a brief time period; undoubtedly a longer time interval would yield more complicated results. Further, the children in the present sample were relatively homogenous with regard to age, socioeconomic status, bilingual status, length of time in school and reinforcement history with respect to teacher and school. Parameters of all these variables should be systematically explored to determine the generalizability of the present study results.

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Footnotes

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TABLE 1
MEAN NUMBER OF EAR PRESSES PER REINFORCEMENT SESSION
UNDER FOUR EXPERIMENTAL CONDITIONS

Condition	M Spanish _{SD}		M English _{SD}	
<u>Mexican-American E</u> S-E order	313.6	92.16	340	28.22
E-S order	316.7	116.36	275.6	151.57
<u>Anglo E</u> S-E order	222.8	148.27	301.3	196.97
E-S order	205.6	143.60	172.7	135.21